Claims

1. An incubation device for serology or histology slides which have a reactive zone, characterised in that:

- it comprises a solid support (1) having a level surface on its upper face in which at least one alveolus (2) is disposed, open on the surface of the support, the opening having an area greater than that of the reactive zone of the slide and smaller than that of the surface of the slide,

- the base of the alveolus has at least two orifices (4) allowing the circulation of fluid(s) in the alveolus,

- the contour of the opening of the alveolus is provided with means which make it possible to ensure a seal; and

- the device further comprises means for disposing and/or locking a serology or histology slide (6) such that the reactive zone of the slide is located in front of the opening of the alveolus on the surface of the support, the slide and the support thus co-operating in order to form a sealed incubation chamber.

2. The device according to Claim 1, characterised in that the means making it possible to dispose and/or lock the slide on the support such that the reactive zone is located in front of the opening of the alveolus are formed by a counterbore, a shoulder or wedges, and possibly a moveable and articulated cover (7) which makes it possible to lock the slide once in position.

3. The device according to Claim 1 or 2, characterised in that a release (13) is provided in the support, at one end of the slide locator, so as to facilitate the release of the slide by simple pressure.

4. The device according to Claim 1, characterised in that the means for positioning and/or locking the slide comprise an articulated frame (14), in particular with a slide, and possibly with locking means.

5. The device according to Claim 1, characterised in that the means for positioning and/or locking the slide are formed by a fixed cover (7) provided with a locator (71) which enables the positioning of the slide (6), the support block of the alveolus being moveable in relation to said cover.

6. The device according to Claim 5, characterised in that the support and the fixed cover are linked by means for guiding the movement of the support and in that it further comprises means for controlling this movement, for example electric or mechanical means.

7. The device according to Claim 5 or 6, characterised in that the fixed cover is pierced by an opening (3) perpendicular to the incubation alveolus.

8. An incubation device for serology or histology slides which have a reactive zone, characterised in that it comprises:

- a solid, moveable support (1) having a level surface on its upper face in which at least one alveolus (2) is disposed, open on the surface of the support, the opening having an area greater than that of the reactive zone of the slide and smaller than that of the surface of the slide, in which the base of the alveolus has at least two orifices (4) allowing the circulation of fluid(s) in the alveolus, and the contour of the opening of the alveolus is provided with means which make it possible to ensure a seal;
- a fixed cover (7) provided with a locator (71) which makes it possible to position the slide, and an opening (3); and

- means for guiding the essentially vertical movement of the moveable support (1) towards the fixed cover (7) in order to make it possible to form a sealed incubation chamber between the alveolus and the slide when the latter is in position, the reactive zone of the slide being contained within said incubation chamber.

9. The device according to any of the preceding claims, characterised in that the alveolus is circular or elongated in shape.

10. The device according to any of the preceding claims, characterised in that the alveolus has a volume of between 5 and 500 µl.

11. The device according to any of the preceding claims, characterised in that the means which make it possible to ensure a seal comprises a join (5).

12. The device according to Claim 11, characterised in that the join is made from a flexible material, preferably latex, synthetic rubber or silicone, and/or in that it is level or toric in form.

13. The device according to any of the preceding claims, characterised in that the solid support is made of plastic material, metal and/or any rigid material which is resistant to saline solutions and to temperatures greater than or equal to 37°.

14. The device according to Claim 13, characterised in that the solid support is composed of polymethacrylate, polyester, polycarbonate, nylon (delrin, rilsan) or stainless steel, on their own or in mixtures.

15. The device according to any of the preceding claims, characterised in that the orifices (4) of the alveolus have a diameter of between 0.1 and 3 mm and/or

are disposed at either side of the alveolus such that scavenging can be implemented.

16. The device according to Claim 15, characterised in that the alveolus has two diametrically opposed orifices, one for the inflow of fluids, and the other for the discharge of fluids.

17. The device according to Claim 1 or 15, characterised in that the alveolus has three orifices, one for discharging fluids, and the two others, close to one another, for the inflow of liquids and gases respectively.

18. The device according to any of the preceding claims, characterised in that it further comprises means for guaranteeing a supply of fluid(s) to the incubation chamber.

19. The device according to Claim 18, characterised in that the supply means include at least one fluid supply reservoir (8) linked to a first orifice of the alveolus, called the inflow orifice, by a piping system for introducing fluid(s) into the alveolus, and a fluid recovery reservoir (9) linked to a second orifice of the alveolus, called the discharge orifice, by a piping system for eliminating fluids, said systems being connected to one or more pumps (10, 11).

20. The device according to Claim 19, characterised in that it comprises several fluid supply reservoirs linked to the inflow orifice, each reservoir being connected to a valve (12).

21. The device according to Claim 19 or 20, characterised in that the supply means comprise one (or more) three-way valve(s) which make it possible to

switch a suction circuit directly to one or another liquid supply reservoir (8) by means of an auxiliary circuit.

22. A device characterised in that the support has a plurality of alveoli as defined in any of the preceding claims.

23. The device according to Claim 22, characterised in that each alveolus is provided with fluid supply means, and in that the alveolus / supply system units thus formed are arranged to function in parallel, using the same fluids, according to synchronous or staggered sequences.

24. The device according to any of the preceding claims, characterised in that it further comprises automatic supply means for the slides, and possibly a read-out identifying the slides.

25. The device according to any of the preceding claims, characterised in that it further comprises means for transferring the slide to a signal read-out device.

26. The device according to any of Claims 1 to 24, characterised in that it comprises a signal read-out device integrated into the support and/or the cover.

27. A serological analysis method comprising the incubation of a serology slide comprising a reactive zone having a series of deposits from infectious, pathogenic, allergenic or autoantigenic agents with a sample of serum from a patient, or a dilution of the same, then the revelation of the antibodies of the sample fixed on the deposits by means of labelled reagents, characterised in that the incubation is implemented in a device according to any of Claims 1 to 26.

28. The method according to Claim 27, characterised in that the sample to be tested is introduced into an alveolus before the slide is positioned, then the slide is applied to the surface of the support such as to form the sealed incubation chamber in which the reactive zone of the slide is in contact with the sample.

29. The method according to Claim 27, characterised in that the sample to be tested is pumped into the incubation chamber formed by the slide positioned on the alveolus.

30. A histological analysis method comprising the incubation of a histology slide comprising a reactive zone having a tissue sample from a patient with a solution of specific antibodies, then the revelation of the antibodies of the solution fixed on the sample by means of labelled reagents, characterised in that the incubation is implemented in a device according to any of Claims 1 to 26.

31. The use of a device according to any of Claims 1 to 26 for serological or histological analysis.

32. A kit comprising a device according to any of Claims 1 to 26.